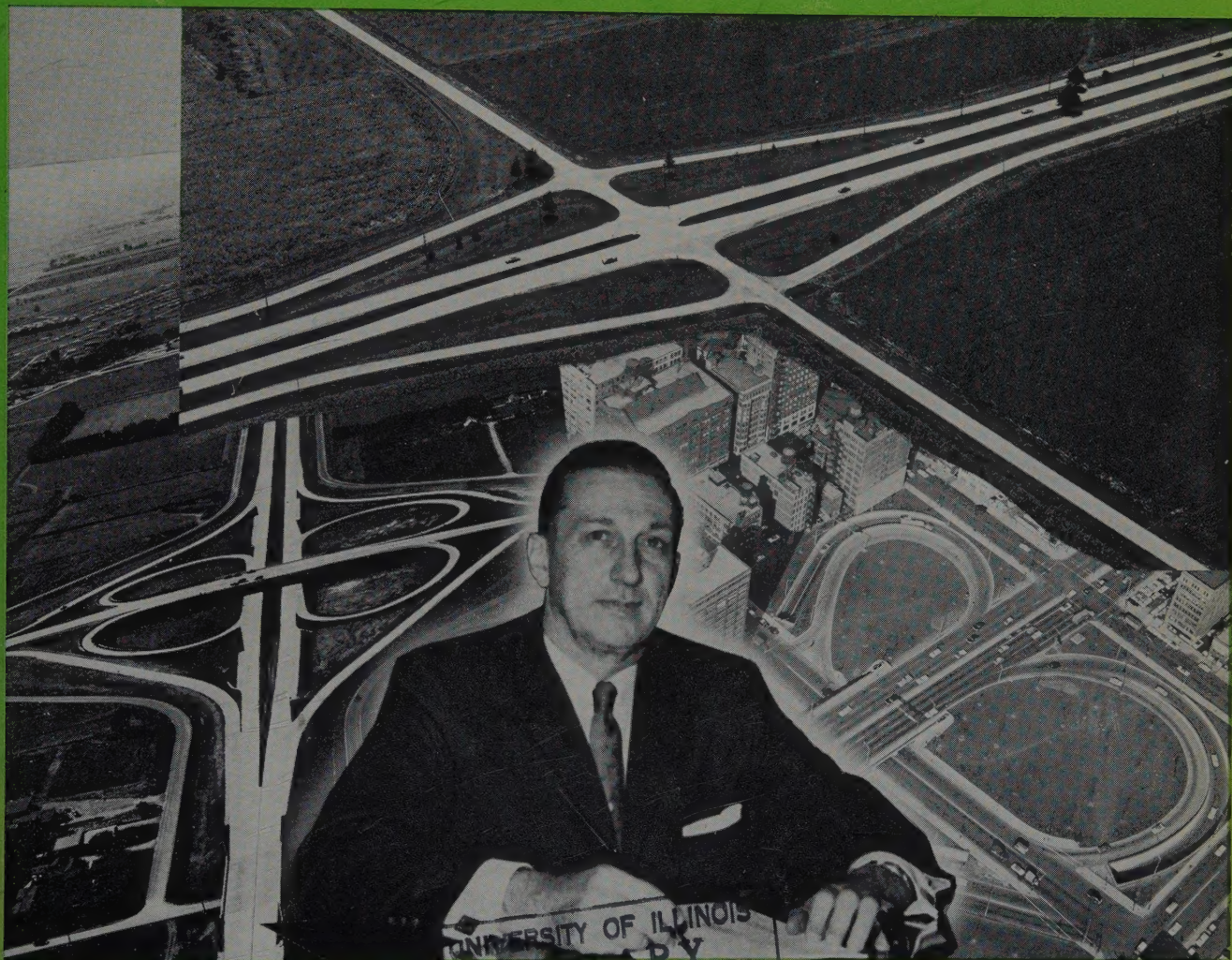




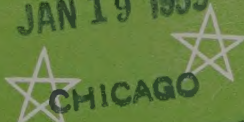
# *the* **ILLINOIS ENGINEER**



Ralph R. Bartelsmeyer, Chief Highway Engineer, Illinois Division of Highways, newly elected President of the American Association of State Highway Officials. (See Page 3.)

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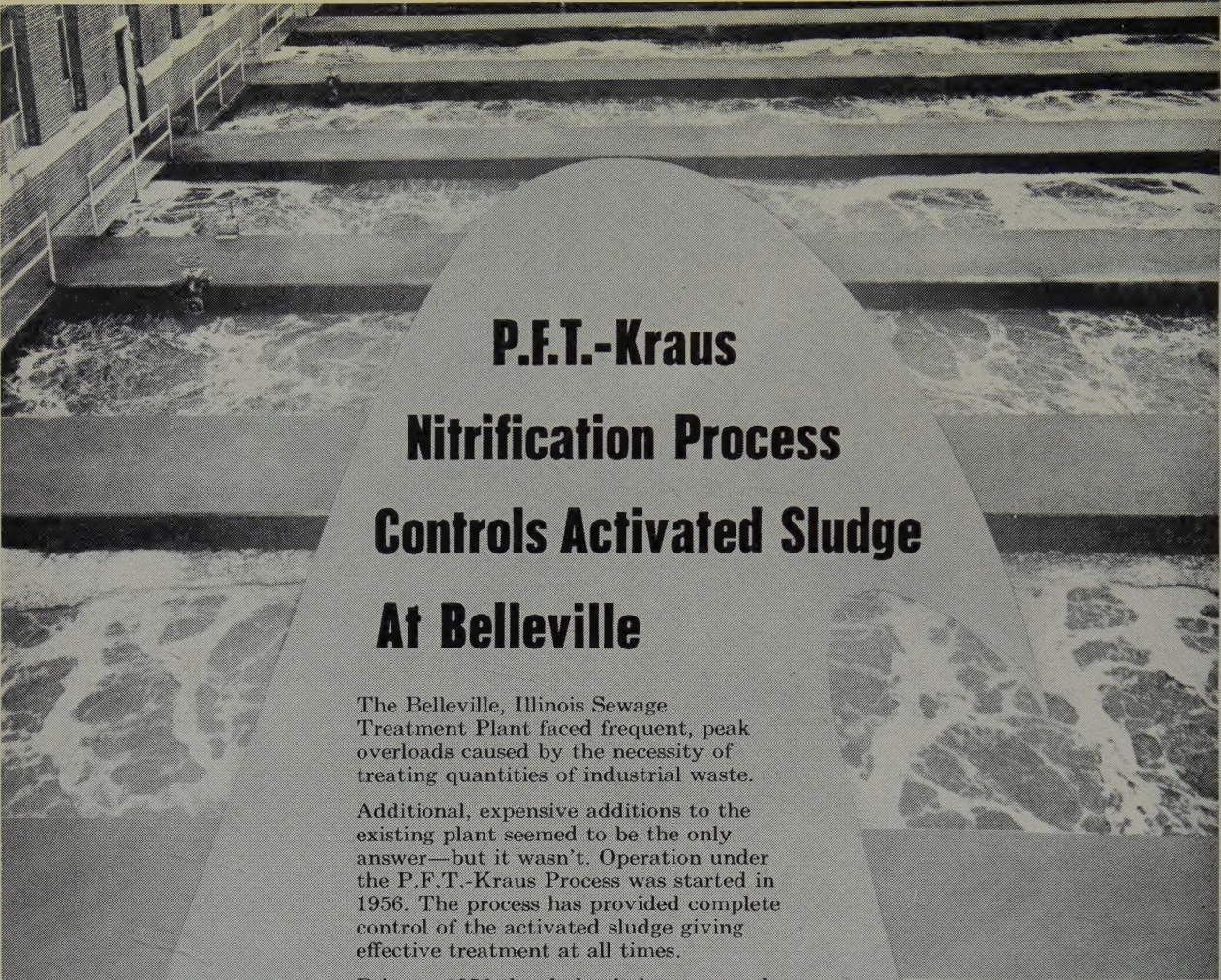
JAN 19 1959



THE ILLINOIS ENGINEER,  
JANUARY, 1959,  
VOLUME XXXV, NO. 1

NATIONAL ENGINEER'S WEEK  
February 22-28, 1959  
"Engineering . . . For the Age of  
Space"





# **P.F.T.-Kraus Nitrification Process Controls Activated Sludge At Belleville**

The Belleville, Illinois Sewage Treatment Plant faced frequent, peak overloads caused by the necessity of treating quantities of industrial waste.

Additional, expensive additions to the existing plant seemed to be the only answer—but it wasn't. Operation under the P.F.T.-Kraus Process was started in 1956. The process has provided complete control of the activated sludge giving effective treatment at all times.

Prior to 1956 the sludge index averaged over 200 with frequent readings of 300. Maintenance of a settleable activated sludge was impossible.

Since the conversion to the P.F.T.-Kraus Interchange Process the sludge index has averaged approximately 75 and no additional structures were required to attain this trouble free operation.

Plant operating personnel estimate that the present plant facilities will be capable of handling an increase of 20,000 population loading—by readily supplying more effective aeration with the P.F.T. Dual Aeration System.

Other P.F.T. equipment at Belleville includes: One 96' and two 55' Floating Covers with three Position Indicators, two Shell & Tube Sludge Heat Exchangers and Gas Safety Equipment.

*Russell, Axon and Associates, St. Louis,  
were the Consulting Engineers*



**P.F.T.**

waste treatment equipment  
exclusively since 1893

**PACIFIC FLUSH TANK CO.,** 4241 Ravenswood Avenue, Chicago 13, Illinois





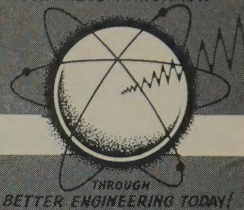
THE

## ILLINOIS ENGINEER

ILLINOIS SOCIETY OF PROFESSIONAL ENGINEERS, Incorporated

Affiliated with the National Society of Professional Engineers

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The ILLINOIS ENGINEER is published  
monthly by the Illinois Society of Profes-  
sional Engineers, Inc., at 817 Myers Building,  
Springfield, Illinois.

The Illinois Society of Professional Engi-  
neers is not responsible for statements made  
or opinions expressed in this publication.

Second-Class postage paid at Springfield,  
Illinois.

Subscription rates are \$2.00 per year in  
advance to members of the Illinois Society  
of Professional Engineers. \$4.00 per year in  
advance to non-members in U.S.A. and its  
possessions, Canada, and Mexico. Foreign  
\$6.00. Single copies 40¢ Special issues \$1.00.



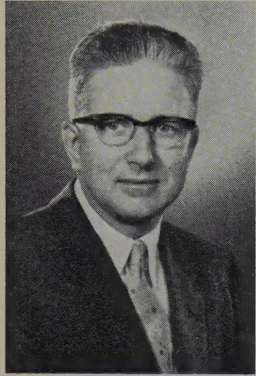
# PRESIDENT'S MESSAGE

By FRANK W. EDWARDS

## WELCOME TO STRUCTURAL ENGINEERS

### *A Unique Situation*

A very special welcome is extended to the registered structural engineers of Illinois at this time by the Illinois Society of Professional Engineers. Although these



Frank W. Edwards

engineers always have been welcome in our society, discussions over the past few months indicate many of them were not aware of this fact. As in many areas of human relations misunderstandings have developed.

This situation has been corrected but before explaining let us take a look at the unique situation surrounding structural engineers in Illinois. The "Illinois Structural Engineering Act" was approved by the General Assembly in 1919. The

"Illinois Professional Engineering Act" now in force was approved much later, July 20, 1945. Each Act regulates the practice of engineering in the respective fields. Only one other state (California) has a separate law for licensing structural engineers. All other states have one law to regulate the practice of professional engineering. The term "professional" in general applies to all recognized branches of engineering and is used in this sense by the National Society of Professional Engineers and its 47 member state societies.

In Illinois, however, because of the two laws many registered structural engineers believe they were excluded from membership in the ISPE as they thought the society represented only those registered under the Professional Engineering Act.

### *Studies Initiated*

This limitation on eligibility for membership in ISPE never was intended. The proposed new constitution makes this crystal clear. The primary interest is to insure that members of the society are fully qualified and permitted legally to perform professional services for the general public.

During the past year a number of engineers have been examining the peculiar position of registered structural engineers in Illinois. Here were professional people regulated in their practice by an act of the General Assembly who had no organization devoted to maintaining and administering the law under which they operate. Numerous discussions of problems and methods for accomplishing desired results were studied by these structural engineers. They also endeavored to obtain the opinions of all engineers registered under the Illinois Structural Engineering Act. They found that nu-

merous engineers recognized the desirability of organized effort and were anxious to participate in an effective organization.

A separate society for structural engineers was considered as well as other plans for organization. It became apparent during these studies that the ISPE exhibited the same ideals and aspirations as those of special interest to structural engineers. Professional development, employment practices, ethics and practice fees and salaries, legislation, public relations and other subjects of interest to this group were directly parallel to the activities of ISPE.

### *Functional Section Organized*

After careful consideration the group of structural engineers examining the status of their colleagues in Illinois decided to organize within ISPE as a "Functional Section for Registered Structural Engineers." The section was authorized by action of the ISPE executive committee, December 6. Temporary officers have been named to serve until the annual meeting in May. The object of this section is to provide an effective forum for discussion and action by registered structural engineers in Illinois. A primary purpose is to preserve and enforce provisions of the Structural Engineering Act and study actions or proposed legislation which might have an effect on the practice of structural engineering.

A functional section of ISPE operates largely as an autonomous group of members who have common professional interests and problems. The section functions under the broad general policies of the ISPE Constitution and By-laws.

The status and welfare of structural and professional engineers alike can only be protected and extended through effective united action. Policies adopted by the functional section and ratified by the ISPE Board have the full support and strength of the Society behind them to make them effective.

### *A Challenge*

Structural engineers are to be congratulated on solving their problem of organization without increasing the number of engineering societies. There are far too many of these in existence now. As a functional section structural engineers are in a unique position to not only concentrate on problems affecting themselves directly but at the same time to assist all engineers in the profession to promote sound professional practices.

Let us now be about our main business of promoting the welfare of the general public and the professional aspects of engineering. We welcome the assistance of the structural engineers and invite all who are not members of ISPE to join promptly.



## FRONT COVER

Five lines of information is the official biographical sketch of Ralph R. Bartelsmeyer, Chief Highway Engineer, Illinois Division of Highways. The five lines released from Bartelsmeyer's office are as follows:

Illinois native—born in Washington County in 1909.

Graduated from University of Illinois—Civil Engineering, 1931.

Employed since graduation in Illinois State and County Highway work.

Appointed Chief Engineer of the Illinois Division of Highways in 1953.

Appointed Member of American Association of State Highway Officials' Executive Committee in 1955.

The modesty of the foregoing biography reflects a true picture of the character of the man. Soft spoken, Bartelsmeyer is a personable fellow who has combined consistent hard work into quiet efficiency, which has become a formula for success and outstanding achievements. Without personal fanfare he has accomplished a peak in his career in his recent elevation to the presidency of the American Association of State Highway Officials. The ILLINOIS ENGINEER commends Ralph Bartelsmeyer for attaining this post, which extends a well-deserved recognition. He was selected to head the Division of Highways because of the record he had made as an able County Highway administrator. Since becoming Chief Engineer of the Illinois Division of Highways he has gained the respect and admiration of all with whom he has had contact.

Ralph R. Bartelsmeyer has been a Member of the N.S.P.E. since 1942. He is a licensed Professional Engineer and Land Surveyor in Illinois and a registered Professional Engineer of Missouri. He maintains his chapter affiliation with the St. Clair Chapter of I.S.P.E.

In being selected to head the Nation's State Highway Officials, Bartelsmeyer has not only reflected credit to himself but to the engineering profession of Illinois and the Country. Our hats are off to Mr. Bartelsmeyer who has done, and will continue doing, outstanding highway work.

## NOTICE TO CHAPTER OFFICERS

Selection of nominees for N.S.P.E. Armco Scholarships may yet be made. Material was late reaching the chapters, which made it impractical to screen applicants and return to I.S.P.E. by the deadline indicated. N.S.P.E. will speed up its part of processing to allow chapters until **January 20th** as the deadline to submit reports on the candidates.

## EDITOR'S COMMENTS

An announcement in the C.E.C. Newsletter reopened a "sore spot" with yours truly.

In attempting to get professional card advertisements from engineer members for the ILLINOIS ENGINEER, I have been rebuffed many times because engineers were in partnerships with architects. A refusal was based on an A.I.A. prohibition against advertising. NOW A.I.A. is inviting engineers to advertise in their Directory. A portion of the announcement is quoted as follows:

Members of Consulting Engineers Council engaged in inter-professional practice have been invited to insert professional cards in the second edition of the *American Architects Directory*.

Writing to the C.E.C. office, *Directory* Editor, George S. Koyl, explained that a section of the new publication is being reserved exclusively for a card listing of the names of consultants *offering engineering services to architects*.

Sponsors of the new Directory are: The American Institute of Architects and the *Architectural Forum*.

Our Comment: Why should engineers take cards in an A.I.A. Directory when A.I.A. refuses to allow its members to advertise with professional cards in Engineer Publications? Why should A.I.A. take a "holier than thou" attitude and then expect engineers to respond to their invitations to list in an A.I.A. publication?

This matter of professional listings should not be a *one-way street!!!*

## COMMENT ON N.S.P.E. ARMCO SCHOLARSHIPS

The N.S.P.E. Armco Scholarship arrangement is a commendable and worthwhile project which will assist many deserving youths to gain engineering training who probably would not have an opportunity otherwise; however, a criticism and a suggestion was voiced by an I.S.P.E. Executive Committeeman. He observed that the Armco Scholarships seem to be too commercial. His suggestion was to name the scholarships in honor of the late Allison Neff, Past President of N.S.P.E. and long time associate of Armco. This would take away the stigma of pure commercialism and make the awards more meaningful to the recipients and to those who administer them.

## NATIONAL ENGINEER'S WEEK

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# EVENTS OF LAST QUARTER, 1958



(1) Newly registered professional engineers honored at a Recognition Dinner given by Peoria area Chapter of I.S.P.E. at the Tazewell Hotel, Pekin, on October 23, 1958. Front row, left to right: George Joeger, Delwin Cobb, Edward Randolph, Mike Foley and Ken Kossieck. Back row, left to right: Melvin Page, Kenneth Probert, Harold Harms, H. Wahls, and Richard Smith. (2) Principal speaker for the Recognition Dinner at Pekin was County Judge Ivan York who spoke on peculiarities of the law. Seated to the left of Judge Yontz is Peoria area Chapter Secretary, Arthur E. D. and Chapter President Carl H. Schmidgall. (3) Newly registered professional engineers who were honored at a joint Recognition Dinner of the Capital, Champaign and Central Illinois Chapters in Decatur. Front row, left to right: M. J. Schultheiss, L. C. Auby, Jr., J. E. Mulholland, Jr., W. R. Salzman and R. T. Danks. Center row, left to right: M. J. R. H. C. Schrader, Chester Wells, Emil L. Tiona, James E. Stephens, and Harold Graves. Back row, left to right: Ken Kossieck, R. P. Kaptain, John T. Vohs, Clarence J. Warner, and Donald Diller. (4) Shown at the joint dinner in Decatur, left to right: Associate Dean of Engineering Emeritus of the University of Illinois, Harvey Jordan, Walter Sherrer, and Winford D. Gerber, Engineer Emeritus of the Illinois Water Survey. (5) Shown at the head table of the Black Top Roads Association Convention in Springfield, left to right: J. P. Hollerich, T. H. F. Norris, C. S. Monnier and John Hardwick. (6) Seemingly somewhat interested in the floor show presented at the Black Top Roads Convention are, front, left, Joe Kammerer and Walter Hanson. (7) Participants on a panel at the Lake County Chapter meeting honoring Young Engineers are, left to right: Carl Anderson, Leo Vogt, Bill Collins and Sigrid Simonson and Panel Moderator, Art Hansen. The discussion was on the subject of "What Professionalism Means to Me." (8) Young Engineers recognized at Lake County Chapter meeting, left to right, Peter Thomas, John Hooper, Patrick Smith, Jim Whitt and Ralph B. Johnson. (9) Left to right: Arthur Kaendl, Jr., one of the new registered professional engineers in Illinois, Dr. Clark A. Dunn, President of N.S.P.E., and Arthur M. Kaendl, Sr., Illinois P. E. Registrant No. 1, getting together at a recent Chicago Chapter Meeting.

## LEGISLATIVE AIRCADE SCHEDULED

The U. S. Chamber of Commerce has in recent years sponsored an Aircade for Legislative Action in principal cities throughout the United States. They are sponsoring a 1959 Aircade to help business men deal effectively with the new Congress on issues affecting them.

There is a strong possibility that legislation will develop in the forthcoming 86th Congress that will vitally affect the engineering profession. In this event there

will be a need to speak out more forcefully, more intelligently, and more persuasively than ever before on the matters.

Illinois engineers who are interested in availing themselves of the Chamber of Commerce's special program will have the opportunity of attending the Aircade in Chicago February 26th at the Morrison Hotel, or in those in the Southern and Central sections of Illinois the Aircade Program will be offered in St. Louis, February 27th at the Sheraton-Jefferson Hotel.



## I.S.P.E. RANKS HIGH IN REPORTS

The membership of the I.S.P.E. has responded very well to the N.S.P.E. Voluntary Fund Campaign. In report dated December 19th Illinois ranked sixth among the member States in percentage of members contributing. The chart below shows the first ten States in order of their contributions:

| State—               | Members | Members Contributing | Pct. of Members Contributing | Total Contribution | Contribution Per Member |
|----------------------|---------|----------------------|------------------------------|--------------------|-------------------------|
| Maryland .....       | 587     | 96                   | 16.4                         | \$1006             | \$1.72                  |
| Alabama .....        | 248     | 39                   | 15.7                         | 378                | 1.52                    |
| Louisiana .....      | 247     | 38                   | 15.4                         | 378                | 1.53                    |
| Connecticut .....    | 582     | 84                   | 14.4                         | 857                | 1.46                    |
| California .....     | 1063    | 147                  | 13.7                         | 1724               | 1.62                    |
| Illinois .....       | 1626    | 220                  | 13.5                         | 2148               | 1.32                    |
| Ohio .....           | 268     | 32                   | 11.9                         | 251                | .94                     |
| Idaho .....          | 126     | 15                   | 11.9                         | 174                | 1.38                    |
| North Carolina ..... | 394     | 46                   | 11.7                         | 443                | 1.12                    |
| Kansas .....         | 774     | 90                   | 11.6                         | 912                | 1.18                    |

The results of the Voluntary Fund Campaign are encouraging but as President Dunn observed an obvious inequity exists in that the nearly \$50,000 contributed will make possible the continuation of certain programs of benefit to all members, with the cost being borne by only about 10 per cent of the membership.

Although Illinois stands toward the top of the list, we can do better in the Fund Campaign. More than 20 members surely can afford to contribute at least one dollar. It is not too late to do your part. The deadline on the Campaign has been extended on into the first part of 1959 in order that a greater number of those who would like to participate may forward their contributions to N.S.P.E. PLEASE DO YOUR PART TODAY.

In other comparisons of standing of the I.S.P.E. with various States it is interesting to note that in the Membership Campaign Illinois ranks fairly good in its group classification; however, we would like to see Illinois right at the top leading by such a great margin that we would not be threatened by the second runners. Illinois stands fifth in its group classification of seven states having a potential of more than 6,000 new members.

| Group VI<br>Over 6000<br>prospects) | Prospects | Current & Arrears<br>4/30/58 | Net<br>10/31/58 | Net<br>Gain | Net<br>Gain<br>per<br>1000 | Rating<br>This<br>Month |
|-------------------------------------|-----------|------------------------------|-----------------|-------------|----------------------------|-------------------------|
| California .....                    | 24,907    | 909                          | 1,009           | 100         | 4.0                        | 7                       |
| Illinois .....                      | 11,061    | 1,362                        | 1,461           | 99          | 9.0                        | 5                       |
| Massachusetts .....                 | 6,235     | 1,040                        | 1,092           | 52          | 8.3                        | 6                       |
| New York .....                      | 11,901    | 4,208                        | 4,365           | 157         | 13.2                       | 4                       |
| Ohio .....                          | 10,164    | 4,272                        | 4,416           | 144         | 14.2                       | 3                       |
| Pennsylvania .....                  | 8,254     | 3,582                        | 3,768           | 186         | 22.5                       | 1                       |
| Texas .....                         | 7,828     | 3,705                        | 3,865           | 160         | 20.4                       | 2                       |

In chapter comparisons Paul Doll, Director of the I.S.P.E., conducted a survey to determine the relative standing of the ten largest chapters in N.S.P.E. In the list of 10 shown below Chicago ranked tenth. In

comparison with some of the cities, such as, Kansas City and Houston, Chicago must get busy membership-wise because it is considerably larger than some of the cities in the first ten but ranks below them in the actual number of members.

## CHAPTER MEMBERSHIP, N.S.P.E.

NOVEMBER 1, 1958

| Chapter                                  | P.E.<br>Members | E.I.T.<br>Members | Surveyor<br>& Other<br>Members | Total<br>Members |
|--|-----------------|-------------------|--------------------------------|------------------|
| 1) San Jacinto ....<br>(Houston, Tex.)   | 1033            | 148               | ...                            | 1181             |
| 2) New York.....                         | 920             | 132               | 15                             | 1067             |
| 3) Philadelphia ....                     | 902             | 3                 | 113                            | 1018             |
| 4) Franklin Co. ....<br>(Columbus, Ohio) | 710             | 187               | 26                             | 923              |
| 5) Cleveland .....                       | 756             | 125               | 29                             | 910              |
| 6) Pittsburgh .....                      | 858             | 26                | 85                             | 858              |
| 7) St. Louis.....                        | 771             | 36                | ...                            | 807              |
| 8) Dallas .....                          | 576             | 139               | 1                              | 716              |
| 9) Western .....                         | 617             | 55                | ...                            | 672              |
| (Kansas City, Mo.)                       |                 |                   |                                |                  |
| 10) Chicago .....                        | 521             | 31                | 101                            | 653              |

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## ILLINOIS SURVEYORS SECOND ANNUAL CONFERENCE TO BE AT UNIVERSITY OF ILLINOIS, FEBRUARY 5-7, 1959

The University of Illinois campus at Urbana again will be the gathering place for Surveyors from all over the state on February 5, 6 and 7, 1959. Some of the topics that will be on the program are: Monumentation, State Plane Coordinates, New Instruments, Fees and Standards, Legal Descriptions, Right-of-Way Problems, Education for Land Surveyors, Photogrammetry and Electronic Computers. The three-day affair will be highlighted with a banquet Friday night at the Urbana Lincoln Hotel.

The theme for the Conference this year is "State-Wide Organization". The Illinois Registered Land Surveyors Association will hold its annual business meeting on Friday afternoon during the conference. Several committees have been at work preparing resolutions to be considered by the conference body.

All papers, panels and discussions will be published in the Proceedings which will be supplied to all conference members at no extra cost and available to others for the cost of publication.

The conference program committee is headed by Arnold A. Lundgren of Rockford, Illinois, and campus arrangements are being made by Prof. Robert K. Newton, Supervisor of Engineering Extension, 725 South Wright Street, Urbana, Illinois, and Prof. Winfield H. Eldridge, Conference Coordinator, Civil Engineering Department, Urbana, Illinois.

I.S.P.E. Surveyors Functional Section met in Peoria on October 3rd to lay the foundation work for the Second Annual Illinois Land Surveyors Conference, to be held on February 5, 6 and 7 at the University of Illinois.

The conference is a joint venture conducted by the Illinois Society of Professional Engineers, the Society of Professional Land Surveyors, the Department of Civil Engineering and the Division of University Extension.

Representing the I.S.P.E. are Arnold Lundgren of Rockford and George J. Chlebiecki of the Chicago Chapter.

A two-day meeting of the committee to finalize details was held November 7 and 8 at Starved Rock Lodge, Utica, Illinois.

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## "CHAPTER ACTIVITIES"

On December 3rd the engineers in industry of the Rockford Chapter met at the Elks Club and organized a chapter functional section for engineers in industry. Roger Ericson, Chapter Representative of the Rockford Chapter, was Chairman for the organizational meeting and Arnold Lundgren, President of the Rockford Chapter, spoke to the group on the needs and advantages of a functional section. The group elected Robert Rull as Chairman, and Dean Purcell, Vice-Chairman.

They planned another early January meeting to make plans to assist in the state program at the 74th Annual Convention in Rockford April 29, May 1 and 2.



At the recent organizational meeting of the Rockford Chapter Functional Section for Engineers in Industry are Roger Ericson, seated; and Rockford Chapter President Arnold Lundgren. Mr. Lundgren spoke to the group on the importance of functional activities.

The Central Illinois Chapter met on November 20th. Mr. William H. Hall was the principal speaker. His subject was "Soil Mechanics as Applied to Foundations." The meeting was a joint affair with the Decorah Contractors Association. Mr. William Storm, ISPE Member, and one of the Contractors, was Program Chairman.

The St. Clair Chapter met in Belleville on November 13th. Officers elected for the forthcoming year were E. W. Markwardt, President; Stanley Petraitis, Vice President; Leo Koberlein, Secretary-Treasurer. Arthur J. Feickert was elected to represent the Chapter to the ISPE Board of Direction. The new officers were installed at a dinner meeting held December 13th at the Elks Club in Belleville. Co-Chairmen for the Installation Dinner are Manuel Garcia and William S. Krause.

The Capital Chapter met November 25th in the Sunbrella Room at the Hotel Leland in Springfield. Dr. George McVittie, head of the Department of Astronomy at the University of Illinois, was the principal speaker.

(Continued on Page 15)



— 2000 —

*Dear Fellow Member:*

With the advent of a New Year, we are reminded of new beginnings. This leads to reflective meditations pertaining to our Society. The most recent report of our membership increase reveals 496 new members have joined with us. This number is evidence that there is a renewed interest in professionalism and our Society. We have a growing and going Society.

A reasonable progression will make our goal of 2000 new members possible.

To those of you who have just joined our ranks: You can be the group that will make this goal possible. You have contact with many others who have not joined the Society. Will you please contact these men and urge them to join, thereby indicating that you propose to be a vial working member of the Society.

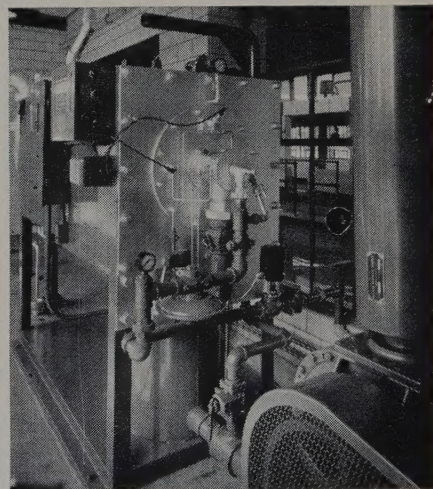
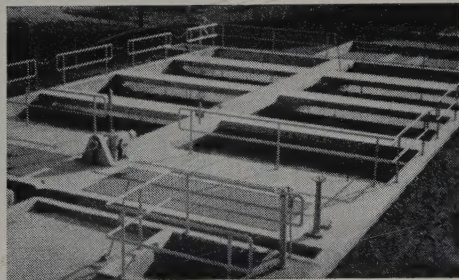
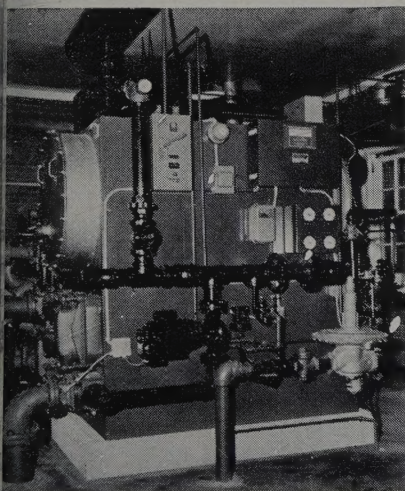
To those of you who enjoy "Elder Statesman" status: Will you too, make a renewed effort to enlist new members thereby attesting to the fact that you recognize our Society to be a vital, living organization, the only answer to professional maturity.

We wish you all a Happy and Prosperous New Year, personally and professionally.

YOUR MEMBERSHIP COMMITTEE

— 2000 —

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Top—Rectangular Collectors at Morris; Baxter & Woodman, Consulting Engrs.  
Right—CARBALL, CO<sub>2</sub> producer at Moline; Greeley & Hanson, Consulting Engrs.

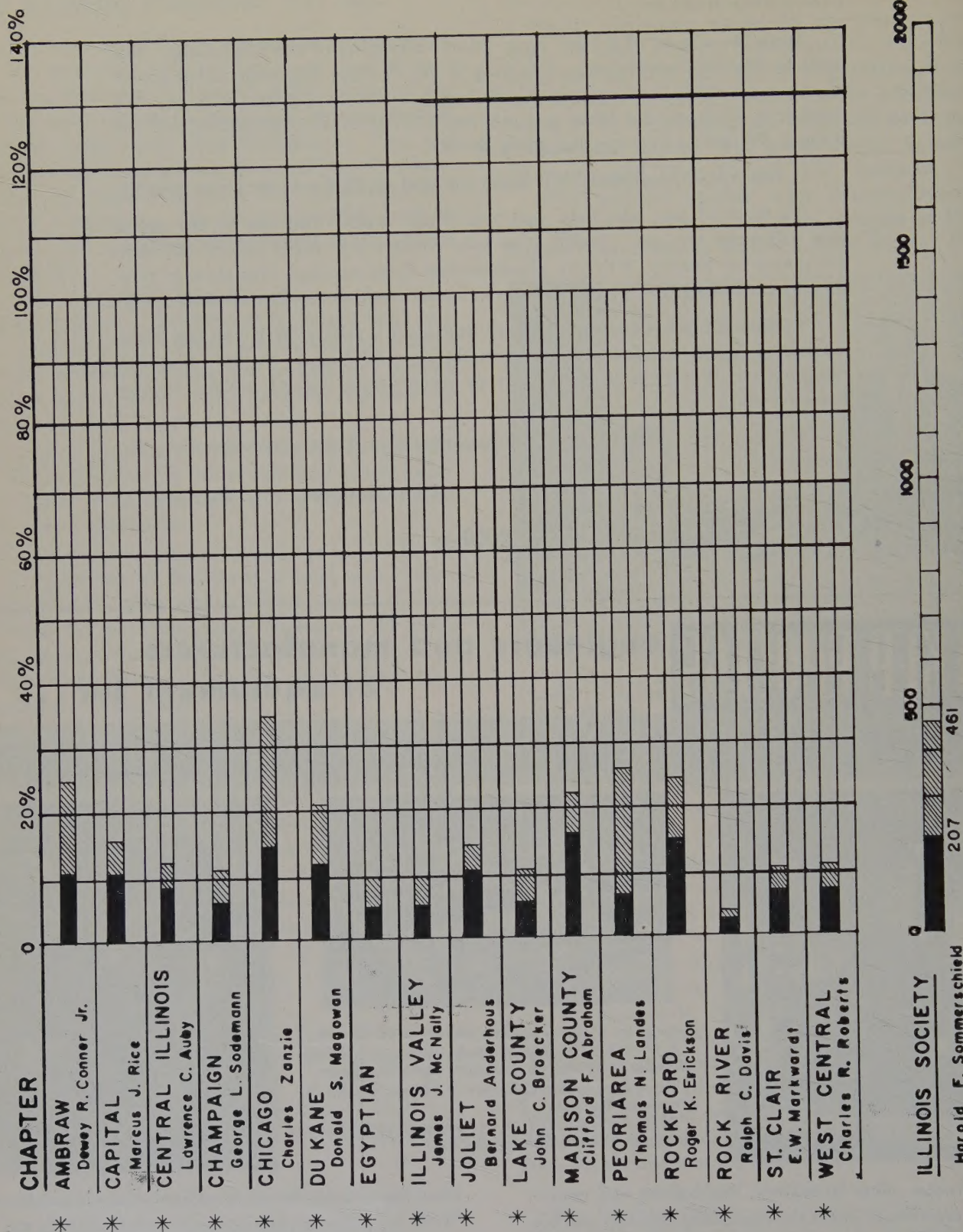
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# MEMBERSHIP CAMPAIGN PROGRESS



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# I.A.C.E. LEGISLATIVE REPORT

By MALDEN JONES, *Executive Secretary I.A.C.E.*

The Illinois Association of Consulting Engineers will seek passage of legislation in the forthcoming 1959 session of the Illinois General Assembly to insure payment by cities to engineers for professional services in connection with public improvements financed by bond issues or special assessments.

The proposal calls for amendment of an existing statute (Sec. 15-3, Chap. 24, Ill. Rev. Stat.) which prohibits municipalities from incurring expenses before there has been an appropriation of funds.

IACE members singled out the change as the sole item on its legislative calendar at a general meeting November 29th in Springfield.

Charles N. Debes, of Rockford, IACE President, said the action was taken as the result of a recent decision of the Illinois Appellate Court (*Beling vs. City of East Moline*) which held that the present statutory provision precluded payment by the city for engineering services rendered in connection with construction of a waterworks, the project having been subsequently abandoned.



Officers of the Illinois Association of Consulting Engineers are shown with legal counsel, Paul Gordon, at a recent meeting in Springfield. Left to right, Charles N. Debes, President; Malden Jones, Executive Secretary; Paul Gordon, George Farmer, and L. K. Crawford.

Paul W. Gordon, Jr., Springfield, IACE Legal Counsel, said the question was the only one of nine considered at the session that warranted legislative action.

"In the absence of such legislation", he stated, "the engineer will be hard put to protect himself. He can, of course, insist that the municipality pass an appropriation ordinance to cover his fee before he executes a contract. Many municipalities may understandingly be unwilling to do this, however. His only other alternative seems to be sure his contract provides that his fee is to be paid solely from the bond issue or special assessment which it is contemplated will be used to pay for the project and, under no circumstances, out of the general funds of the municipality.

"By so doing he will have no assurance that he can collect, but the *Beling* case would seem to be authority for precluding such recovery, since that case held that

*Beling's* contract contemplated payment out of the general fund under some circumstances."

George Farnsworth, of Bloomington, said IACE had considered nine "possible legislative questions, including the *Beling* case", and that these had been presented to Gordon for study and recommendation.

As legal counsel, Gordon, who served in the last two sessions as parliamentarian for House Speaker Warren Wood, and has a sound knowledge of legislative procedures, submitted his replies in a concise well-prepared memorandum.

The list of questions answered and which will be solved in different ways included the following:

*Is it legal for a Sanitary District to perform engineering work in connection with sewer developments by a private sub-divider?*

Answer: So far as I have been able to determine, this question has never been before our courts and it is possible that they would hold that such activity on the part of a sanitary district was *not* within of scope of the statute or was not for a public purpose and, therefore, not a proper function of the sanitary district.

*May the Sanitary District INSIST that all engineering work in connection with sewer developments by private sub-dividers be performed by the sanitary district?*

Answer: The simplest and most practical solution would be to discuss the matter with the officers of the offending districts and to try to persuade them that they should discontinue the practice of performing work for private sub-dividers. If unsuccessful, then resort can be made to one of the other alternatives (legal action or legislation).

*May a county perform engineering work for other counties or municipalities?*

Answer: Legislation would *not* be necessary in this area. The practice involved could no doubt be halted by injunction. Again, however, it would seem to be more preferable to first take the more direct and practical approach of discussing the matter with the proper officials of the offending county in an effort to persuade them that the practice in question should be discontinued.

*Should acts passed by the legislature be amended to add a provision that if a portion of the act is held invalid the validity of the balance of the act shall not be affected?*

Answer: It would not seem to be worthwhile introducing legislation solely to insert a severability clause in the two Acts in question. If, however, other amendments to either Act were contemplated, it would no doubt be wise to also include an amendment inserting such a clause.

*May engineers employed by the Department of Public Works and Buildings properly engage in performing outside engineering work?*



Answer: The simpler and more practical solution would seem to be consultation with the heads of the State Departments involved. If they agree to discourage such extra-curricular activities or, at least, to urge that the State-employed engineers charge fees comparable to those charged by private engineers for such outside work as they perform, the problems created by these activities would to a large extent be eliminated.

*Should a bill be offered to repeal Sec. 3 (5) of Article II which provides that the Department of Public Works and Buildings prepare plans, specifications and estimates for the construction and repair of bridges and culverts upon the request of a county superintendent of highways?*

Answer: Here again, legislation would probably stir up formidable opposition. In view of this and the fact that, as I have indicated, there seems to be a more simple and practical approach, at least as to regulating the outside activities of State-employed engineers, I would not encourage repeal of the Section.

*What, if anything, can be done to raise fee schedules set up by the State?*

Answer: The only thing that can be done is to try to convince the Administration that the schedules should be raised. In this connection, it can certainly be argued that a schedule which establishes sub-standard fees is expensive economy. As with most things if the fee that is paid is sub-standard, the work that is performed is likely to be sub-standard, too. You will, of course, be faced with the constant problem faced by the government of trying to live within its budget, and many governmental sins are perpetrated in the guise of economy. If you cannot convince the administration that the schedule of fees should be raised you may seek to amend the bills establishing them when they are introduced in the legislature, but any such amendment would probably face pretty tough sledding.

*May a County Superintendent of Highways, who is not a surveyor, prepare plats and sign them?*

Answer: Present statutes seem to be adequate to cover this situation and additional legislation is not recommended. Current statutes provide that when land is subdivided, it shall be surveyed and a plat thereof made by the County Surveyor, former County Surveyor, or a Registered Illinois Land Surveyor. (There are penalties for violations.)

*Should the seal of an engineer who performs work on mechanical and electrical plans for an architect appear on his work?*

Answer: It seems evident that an amendment such as that suggested would incur strenuous opposition; and inasmuch as the Professional Engineering Act now requires engineers to place their seal on work done by them, its is probably unnecessary. The answer to the problem, once again, appears to be along a more direct and practical line of (1) seeking the cooperation of the

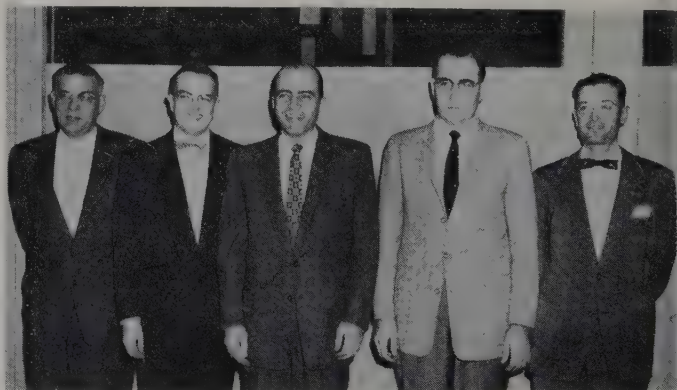


Shown speaking to a recent meeting of I.A.C.E. is Kenneth Stapleton, Chairman of the I.A.C.E. Fees and Salary Committee. Seated to his left is Dwain Wallace, Past President of I.S.P.E. and Chairman of the Fees and Salaries Committee.

architects, and; (2) urging the engineers to insist that they be permitted to put their seal on their work. This they should be able to do by simply pointing out that under the statute they are required to do it.

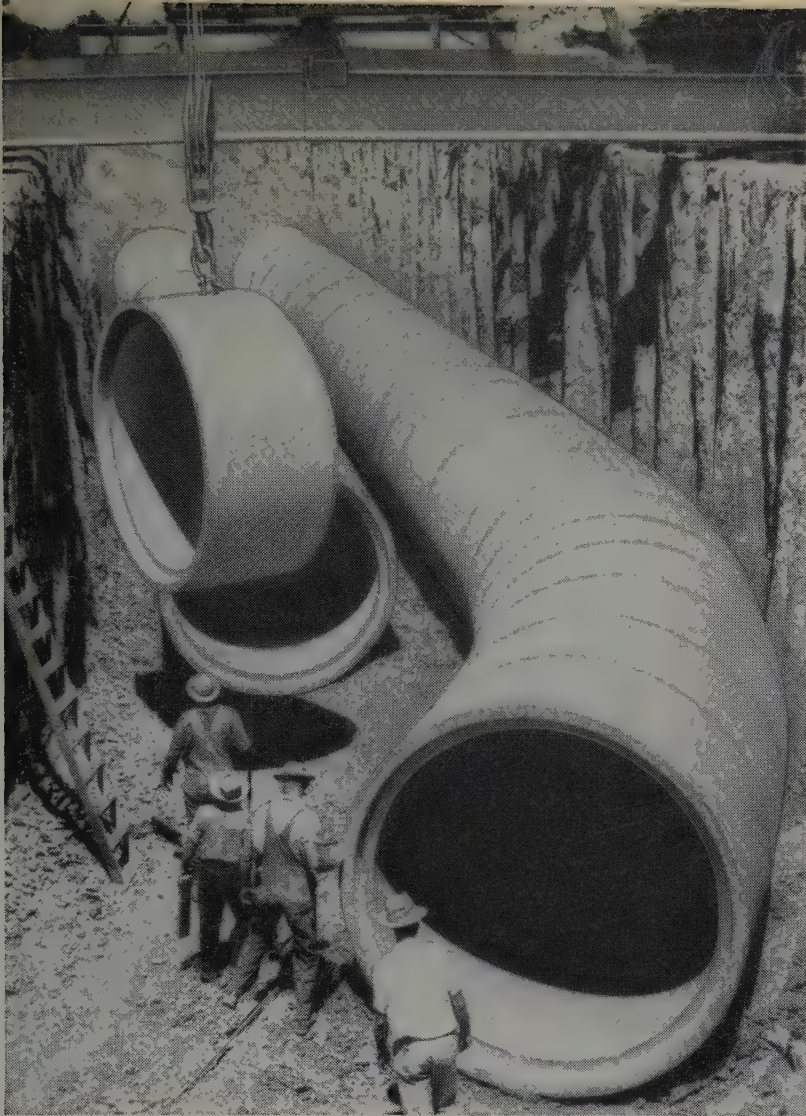
#### EDITOR'S NOTE:

The report given by Malden Jones, Executive Secretary of the I.A.C.E., is based upon questions and answers submitted to Attorney Paul Gordon relative to the needs for legislation affecting engineers in the Professional Engineering Act. The opinions given by Mr. Gordon have resulted in the I.A.C.E. and I.E.C. adopting these recommendations as the legislative program for 1959. The legislative committee of the I.S.P.E. had reached a similar conclusion several weeks ago in a report which recommended that no particular positive action be taken by I.S.P.E. during this legislative session. The I.S.P.E. report recommended that a continuing study be made of legislative needs and did not rule out the possibility of attempting to introduce legislation which would have the effect as counter-measures against bills which may be introduced that would be unfavorable to engineers.



Joliet Chapter elected its new officers for 1959 at their November meeting. Standing, left to right, are: Howard A. Hassert, outgoing President; Sanger K. Westphal, Secretary; Bernard Anderhous, President; Francis A. Murray, Treasurer, and James R. Gates, Vice President. Not present for the picture was William S. Gray, Chapter Representative.





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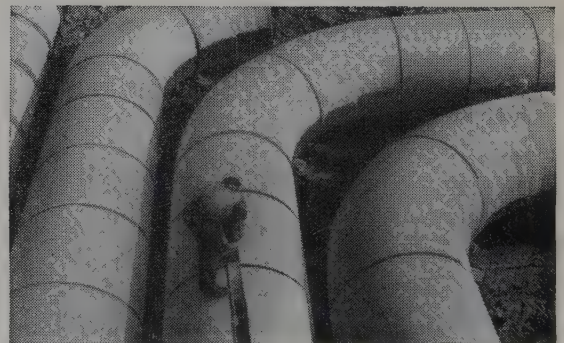
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## A.G.C. CONVENTION HAS OPTIMISTIC OUTLOOK

The Associated General Contractors of Illinois held their 52nd Annual Convention in Springfield December 8 and 9 amid an air of optimism for the greatest construction year in history during 1959. Fred W. Heldenfels, Jr., President of the National Associated General Contractors, stated that the outlook of business in the construction industry during the forthcoming year indicates a 7 per cent increase in construction contracts over the record year of 1958.



Colonel Charles B. Schweizer, District Engineer for the St. Louis District Corps of Engineers, U. S. Army, outlined the extensive program of river development in his address before the Illinois A.G.C.'s 52nd Annual Convention at the St. Nicholas Hotel in Springfield, December 8 and 9. Shown to the left of Colonel Schweizer is Fred W. Heldenfels, Jr., President of the National A.G.C., and James Sprouse, head of the Heavy Division of the A.G.C.

Governor William G. Stratton confirmed Heldenfels' predictions insofar as Illinois is concerned when he announced a record highway construction program for the State of Illinois approximating a three hundred million dollar outlay for inter and intra-state projects. Governor Stratton stated that the Division of Highway Engineers were stepping up the planning phase with the assistance of Consulting Engineers so that projects will be kept planned well in advance of construction.

Featured during the two day Convention was a luncheon honoring Scholarship Award winners given to outstanding students in engineering by the Illinois A.G.C. and two A.G.C. member firms, S. J. Groves Company and McDougal-Hartmann Company. Dean Newmark, head of Civil Engineering College at the University of Illinois, spoke at the luncheon meeting and encouraged the contractors to keep the Scholarship Awards going because of the great need for engineers in the

field of highway construction and in the teaching fields. The boys who were honored were Joseph Pound, Marshall Thompson, Donald Niebel, George Fisher, Alfred Hendron, Jack Lane, Darrell Lohmeier and Robert Lynn.



Engineering Professors from the University of Illinois and students who won Engineering Scholarships were honored at a luncheon during the Illinois A.G.C. 52nd Annual Convention. Top, left to right, Professor Ellis Danner; Paul F. Kent, newly elected President of the Illinois A.G.C.; Jack Hartman; Professor N. M. Newmark, Head of the Civil Engineering Department of the University of Illinois; Professor Stanley Pierce; and A. J. McKay. Below, seated are Mr. McKay, Superintendent of S. J. Groves Construction Company and Mr. Hartmann, with McDougal-Hartmann Construction Company, co-sponsors of the Engineering Scholarships. Standing, left to right, Associate Professor John W. Hutchinson. Freshmen Scholarship winners, George Fisher and Robert Lynn; Sophomore winners, Wayne Neibel and Darrell Lohmeier; Junior winners, Jack Lane and Marshall Thompson; and Senior winners, Alfred Hendron and Joseph Round—who were the initial winners in the series of Scholarship Awards.

JOHN DOLIO, P.E., Chicago Member of the I.S.P.E. Board of Direction and a Member of I.S.P.E. Construction and Building Codes Committee, has been selected to serve on the Coroner's "blue ribbon" jury to investigate the cause of the December 1 fire at Our Lady of the Angels Parochial School which took the lives of 93 persons. Also, serving with Mr. Dolio is another prominent engineer Member of I.S.P.E., Mr. Edward J. Wolff.

First meeting of the jury was held December 10th and will continue until the jury agrees on a definite finding as well as a recommendation to the Building Commissioner for possible revisions to the present building code.



# ECONOMY...

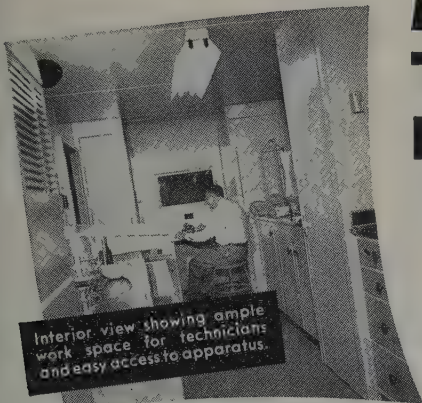
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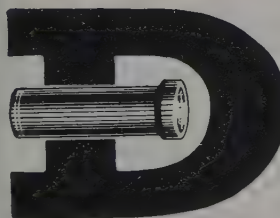


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Dickey Vitrified Clay Sewer Pipe — in 8" diameter—was installed on Concho Street, San Antonio in October, 1894. This line gave 62 years of uninterrupted service. Twenty feet of the line was re-located and replaced with more Dickey Pipe. Balance of the 400 ft. line remains in service. Even after 62 years of heavy usage, the original Dickey Clay Pipe is as good as the day it was originally installed—unaffected by years of corrosive wastes it has carried. When you plan your municipal sewers, always specify chemically inert pipe that serves today and tomorrow with equal efficiency — Dickey Salt-Glazed Vitrified Clay Sewer Pipe.

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## CHAPTER OFFICERS' CONFERENCE IN PEORIA

The Annual Chapter Officers' Conference will be held in Peoria Saturday, January 31st.

This is one of the more important Conferences held during the year as it gives an opportunity for full discussion to clarify matters of coordination between the Chapter, State office, and National headquarters, and provides an opportunity for exchange of ideas between the various Chapters to promote better programming and to resolve numerous problems confronting Chapter Officers.

John Housiaux, Chapter Activities Committee Chairman, will preside at the meeting and has requested that anyone wishing to make specific suggestions for inclusion on the program agenda do so at the earliest possible date.

The tentative program includes a panel discussion of the operation of the State office and the need for closer and faster communications by the Chapter Officers and the State office in order that reference can be readily made to the National Headquarters or to any committee chairman who should be apprised of any particular matters.

All Chapter Officers are urged to attend this important meeting and any individual Members who are interested in attending are cordially invited to attend as observers, or as participants, if anyone should wish to submit suggestions or ideas on the operation of I.S.P.E.

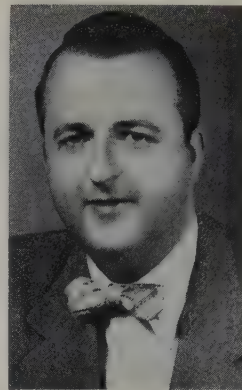
MR. M. F. LINDEMAN announces the opening of an office for consultation and engineering services in the practice of civil engineering. Mr. Lindeman, who is a registered Structural Engineer, will confine his practice to construction, structural foundations, buildings and bridges. The new office is located in Room 706, Ferguson Building, Springfield, Illinois.

Mr. Lindeman has a widely diversified experience background in teaching, highway work, special governmental defense work, and as an engineer in industry. For several years he was a member of the faculty at the University of Illinois as Associate Professor of Civil Engineering. He served as Construction Engineer for a period of two years at the Metz, France, area on the Air Force and Army installations, which was defense work under NATO. During World War II, he was a stress and project engineer for Fisher Aircraft Division of General Motors Corporation and was responsible for stress analysis and stress approval on component parts in assemblies of B-25 and B-29 bombers. He has at different times been employed by the Illinois Division of Highways, which work included layouts and designs of bridges for different large river bridges within Illinois. Mr. Lindeman is a Member of I.S.P.E.

## CHICAGO YOUNG ENGINEER HONORED

The Chicago Chapter of the Illinois Society of Professional Engineers recently nominated Mr. John P. Gnaedinger, 32, for consideration as one of the Nation's

Ten Outstanding Young Men of 1958, to be selected by the United States Junior Chamber of Commerce.



John P. Gnaedinger

Mr. Gnaedinger is President of Soil Testing Services, Inc., 1837 North Harlem Avenue, Chicago. His firm got its start as a part-time operation in a small garage ten years ago and has grown to where it now has a nation-wide scope of activity and is recognized as one of the leading firms of soils engineers.

The Corporation now employs 50 people, of which 15 are graduate engineers. The Company has 13 truck-mounted drill rigs and one amphibious duck-mounted drill rig for use on land or water. With this equipment, the firm is able to make soil borings for subsurface investigations and then analyze the results in the laboratory, thus enabling them to make recommendations to their clients as to the type of foundations that should be employed in the design of their building.

Mr. Gnaedinger's firm also has branch offices in several other cities in the United States. They have performed work on projects in Canada, Mexico, South America, the Near East, Philippines, and Cuba.

During the past ten years, Mr. Gnaedinger also founded the Labquip Corporation, the Chemject Corporation and Ensayos de Suelos Chas Martin SA in Havana, Cuba. The first firm is a manufacturers' representative for engineering testing equipment, and the Chemject Corporation is engaged in the field of chemical stabilization of soils. Ensayos de Suelos is a Soil Consulting firm. He now acts as a consultant to all three firms.

While developing his large organization, Mr. Gnaedinger has been active in professional and civic organizations. He is an active member of eight professional societies or boards. Mr. Gnaedinger has served and is continuing to serve on numerous local and national committees of all these societies.

In addition to these activities, he has found time to write several technical papers and to become a registered structural engineer in Illinois and a registered professional engineer in the States of Illinois, Iowa, Indiana, Wisconsin, Connecticut, New York and Kentucky.

The United States Junior Chamber of Commerce will announce their selection at their Awards Congress in Fort Lauderdale, Florida, on January 16, 1959.



**"CHAPTER ACTIVITIES"***(Continued from Page 6)*

Dr. McVittie recently returned from a meeting of the International Astronomical Union in Moscow. He spoke on the subject of the space age and his impressions of Russia.

The Du Kane Chapter met on November 20th at the Aurora Elks Club. Don Cavanaugh, area representative for Armeo Drainage and Metal Products, gave the story of prefabricated steel illustrated by means of a colored sound film.

New officers elected for 1959 were John Fast, President; Ben R. Howden, Vice-President; Walter Deuchler, Jr., Secretary-Treasurer, and Richard Thornton was elected Chapter representative to the ISPE Board of Direction.



Dr. George McVittie, head of the Department of Astronomy, University of Illinois, gave his impressions of his recent visit to Moscow before the Capital Chapter in late November. Shown to the left of Dr. McVittie is Chapter President H. L. Brantley, and to the right is Walter Hanson and Chuck Ritchie.

**REFRESHER COURSES BEING FORMED**

The Illinois Society of Professional Engineers in cooperation with the University of Illinois Extension Service is again making plans for engineering refresher courses for those who wish to take the Illinois Professional Engineering Examination in May. A course will be established in any area in which a minimum of 15 students are available. Classes will begin in the respective areas on or about February 1st and will continue for a period of eleven weeks. The cost for the course is \$17.50. Tentative areas in which plans are being made to make available the refresher courses are Quincy, Bloomington, Peoria, Mattoon, Robinson and Kankakee. The refresher courses are usually conducted each Fall and Winter in the larger areas; such as, Chicago and Springfield.

Any individual, or Chapter Officer, who desires further information, or is interested in a course in any area, please contact the I.S.P.E. Headquarters immediately.

**MEMBERSHIP REPORT**

A recent membership status report, which was mailed out to the Chapter Officers and Members of the I.S.P.E. Board, indicates that real progress is being made in the Membership Campaign toward the goal of 2,000 new Members by May. A net total of 2,498 Members, of which 271 were newly registered engineers who accepted the I.S.P.E. offer of Introductory Membership. In addition to the net total, another 80 applications are in varying stages of processing and will eventually be reflected in what will be a total of 2,578.

A glance at the Membership Campaign Progress Chart in the center of this Issue will show that the Rockford Chapter made the biggest percentage gain of any Chapter during the period of the current Membership Campaign. Of particular significance is the fact that Roger Ericson, Membership Chairman of the Rockford Chapter, has been personally responsible for securing 25 new applications. The enthusiasm and results accomplished by Ericson should be a challenge to each and every Member of I.S.P.E. If Ericson can obtain 25 new applicants, almost all of which came from one firm, surely each Member can realize at least one new application.

In October when the Membership Chairmen's Meeting was held in Springfield, challenges were made by the Membership Chairmen of different Chapters. Ericson is competing with Thomas N. Landes of Peoria area Chapter. Recently Ericson vowed that he would ride in the wheelbarrow instead of pushing it at Convention time; and if he keeps up at the present pace, there will be no question as to one Committee Chairman who will be given a handcart ride down the Main Street of Rockford.

In spite of being late in mailing ballots and dues statements to the Membership the returns have been coming into I.S.P.E. Headquarters at a lively rate. The mailing was made on December 12 and 13 and in only two weeks 528 ballots and 673 checks were received. The dead line for receipt of ballots to be officially counted was noon on January 5th.

The Teller Committee to canvass the results of the voting was composed of the Officers of Capital Chapter and one Officer from the Champaign County Chapter. The count got under way on the evening of January 5th, but because of an early deadline for copy for the January Issue the results of the election will be given in the February Issue of the ILLINOIS ENGINEER.

Although the deadline is passed for returning ballots **DON'T LET UP ON THE 1959 DUES CHECKS. LET'S NOT HAVE ANY DELINQUENT MEMBERS THIS YEAR.**



A JOINT I.S.P.E. - I.A.H.E. Committee Meeting will be held in Chicago Saturday, January 17th. The joint cooperative committee came about because of a greater need for closer cooperation between I.S.P.E. and the Illinois Association of Highway Engineers. The Committee is expected to study such subjects as consultants doing highway construction supervision where needed, the need for better salaries and classifications within the Highway Department, the possible need for legislation, and any other matters which will be of mutual interest. It is anticipated that the joint Cooperative Committee will be a continuing liaison committee, which will meet every other month during a legislative year. The Members of the Committee representing I.A.H.E. are J. L. Calhoun, Chairman; H. I. Shively, F. W. Moore, K. A. Johnsen, A. H. Ferger and R. A. Lonier. Those representing I.S.P.E. are Walter Hanson, Chairman; Herb Brantley and Melvin E. Amstutz. Frank Edwards, President of I.S.P.E., and Larry Goddard, Executive Secretary I.S.P.E., may sit as ex officio Members of the joint committee.

### LIFE INSURANCE PLAN PROPOSED

Would you be interested in Life Insurance in an amount up to \$10,000 at the yearly price of \$30.00?

A proposal has been submitted by the New York Life Insurance Company in which a group plan is available to the I.S.P.E. at a cost near wholesale. The plan would be in decreasing amounts dependent upon age, with the highest amount of protection at the time of greatest need and the lower coverage as the need of protection diminishes. A committee has been set up to study the proposal, along with various proposals of group hospitalization coverage, for Society members.

If you would be interested in the life plan, or a hospitalization plan, please notify the I.S.P.E. Office so that we may have the benefit of membership guidance in reaching a decision on the proposal.



A new I.S.P.E. Chapter was formed at Bloomington November 24 under the sponsorship of the Central Illinois Chapter. Left to right, Gilbert Henning, President of Central Illinois Chapter, and the steering committee selected to complete formalization of the Chapter, Lee Rhodes, Howard Elder, Frank S. Wylie, Jr., and Don Ferguson.

The Missouri Society of Professional Engineers has already inaugurated the life plan at the \$30.00 per year rate.

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### COMING EVENTS

Chicago Chapter—Ira Bach, Chicago Planning

Commission—Engineers' Club .....Jan. 8

I.S.P.E. Board Meeting, Urbana.....Jan. 10

Salt Creek Chapter (West Chicago Suburbs)...Jan. 13

DuKane Chapter Meeting.....Jan. 15

I.A.C.E. Meeting—Chicago .....Jan. 17

Lake County Chapter—Hanks Supper Club...Jan. 21

I.S.P.E. Executive Committee, Peoria.....Jan. 30

Chapter Officers Conference—Peoria.....Jan. 31

Illinois Surveyors' Second Annual Conference,

University of Illinois.....Feb. 5, 6, 7

Salt Creek Chapter (West Chicago Suburbs)...Feb. 10

N.S.P.E. Winter Meeting, Dinkler-Tutwiler

Hotel, Birmingham, Ala.....Feb. 19-21

Engineers Week .....Feb. 22-28

Chamber of Commerce—1959 Aircade for

Legislative Action—Chicago .....Feb. 26

St. Louis .....Feb. 27

I.S.P.E. 74th Annual Convention,

Rockford.....April 30, May 1 and 2



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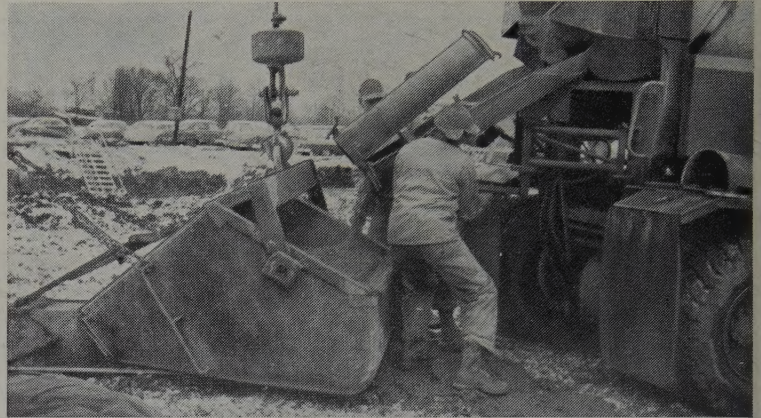
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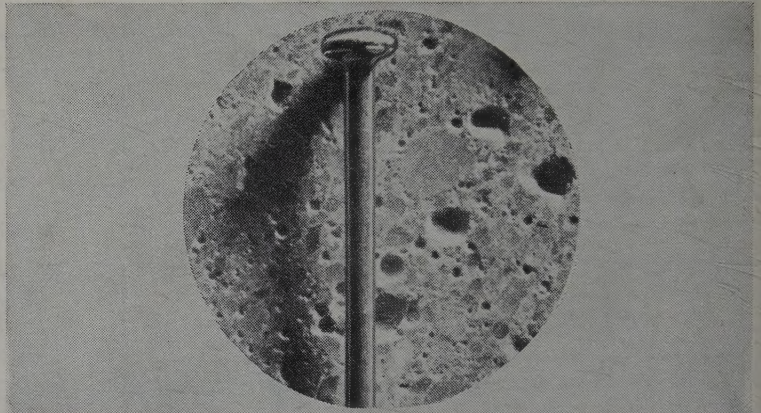


# 3 points to watch for better winter concreting

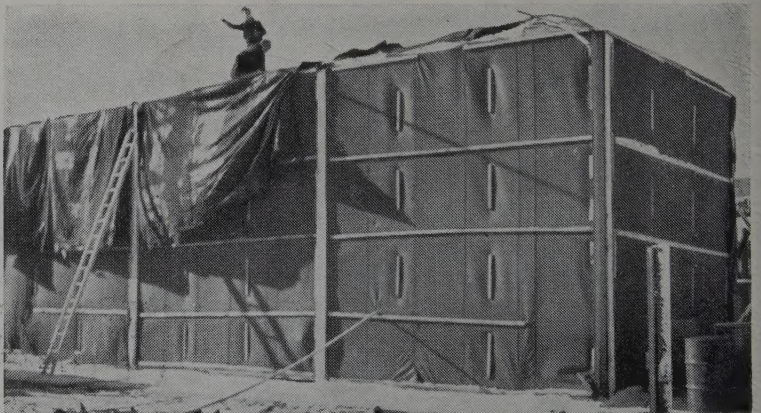
**1.** Plan ahead. Concrete will be delivered at a temperature between 50° and 70°F. Be ready to place at once. Have forms and reinforcing steel free from ice and frost—live steam works best. And, of course, never place concrete on frozen ground. It will settle when it thaws.



**2.** Specify air-entrained concrete for all jobs—structures and pavements. Resistance to freezing and thawing is greatly increased—freezing water in the concrete has room to expand harmlessly into the air cells. Magnified photo shows size of air cells compared with ordinary straight pin.



**3.** Provide suitable curing temperatures. Use protective coverings as needed, either with or without moist heat, to keep concrete at 70° or above for 3 days, or 50° or above for 5 days. Protect from freezing for at least 4 days. Rate of cooling concrete shouldn't exceed 1 or 2 degrees per hour.



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